ABSTRACT

A method of production of a silicon carbide single crystal enabling fast, stable, and continuous growth of a high quality silicon carbide single crystal and enabling both an increase in size of the bulk single crystal and an improvement of quality of a thin film single crystal, comprising stacking, in order from the bottom, a silicon carbide source material rod, a solvent, a seed crystal, and a support rod supporting the seed crystal at its bottom end so as to form a columnar workpiece, heating a bottom end of the source material rod as a bottom end of the columnar workpiece, and cooling a top end of the support rod as the top end of the columnar workpiece so as to form a temperature gradient inside the columnar workpiece so that the top end face becomes lower in temperature than the bottom end face of the solvent; and causing a silicon carbide single crystal to grow continuously ~~to the bottom~~ downwardly starting from the seed crystal, wherein said method further comprises using an inside cylindrical susceptor tightly surrounding the outer circumference of the columnar workpiece.